PATENT

In re Application of:

Kenji MORIMOTO et al.

Serial No.: 10/088,479

Filed: March 20, 2002

For: FLIP CHIP PACKAGE, CIRCUIT BOARD THEREOF AND PACKAGING METHOD

THEREOF

## INFORMATION DISCLOSURE STATEMENT

Commissioner for Patents Washington, D.C.

Sir:

Pursuant to 37 C.F.R. §1.56, the attention of the Patent and Trademark Office is hereby directed to the references listed on the attached Form PTO-1449. Copies of each of the references listed on Form PTO-1449 are attached.

Also enclosed is a copy of an International Search Report bearing a mailing date of April 2, 2002, and the USPTO is directed thereto for a concise statement of possible relevance of the references cited therein.

> PLEASE ACCEPT THIS AS **AUTHORIZATION TO DEBIT** OR CREDIT FEES TO DEP. ACCT. 16-0331 PARKHURST & WENDEL

The above information is presented so that the Patent and Trademark Office may, in the first instance, determine any materiality thereof to the claimed invention. See 37 C.F.R. 1.104(a) and 1.106(b) concerning the PTO duty to consider and use any such information. It is respectfully requested that the information be expressly considered during the prosecution of this application, and that these references be made of record therein and appear among the "References Cited" on any patent to issue therefrom.

Respectfully submitted,

Roger W. Parkhurst

Registration No. 25,177

PARKHURST & WENDEL, L.L.P.

April 29, 2002

Date

RWP/jmz

Attorney Docket No.: YMOR:242

PARKHURST & WENDEL, L.L.P. 1421 Prince Street, Suite 210 Alexandria, Virginia 22314-2805

Telephone: (703) 739-0220

| Sheet <u>1</u> of <u>1</u>   |                    | 15         |   |          |                       |          |          |               |  |
|--|--------------------|------------|---|----------|-----------------------|----------|----------|---------------|--|
| FORM PTO 1449 (modifie   | orn                |            | ATTY DOCKET NO. SERIAL NO.              |          |                       |          |          |               |  |
| U.S. DEPARTMENT OF COMMERCE  |                    |            | YMOR:242 SERIAL NO. 10/088,479          |          |                       |          |          |               |  |
| PATENT A   | ND TRADEMARK OFF   | ICE        | APPLICANT<br>Kenji MORIMOTO et al.      | ADD      | 6.                    |          |          |               |  |
| LIST OF REFERENCES CITED BY APPLICANT(S) (Use several sheets if necessary) |                    |            | FILING DATE March 20, 2002              |          |                       | GROUP    |          |               |  |
|  | <del></del>        |            | U.S. PATENT DOCUMEN                     | N P      | IDFMAFT.              |          |          |               |  |
| *EXAMINER  | DOCUMENT           | DATE       | NAME                                    |          | CLASS                 | SUBCLASS | FILING I | DATE IE       |  |
| INITIAL  | NUMBER             | DATE       | IVAIVIL                                 |          | CLAGG                 | SOBOLASS | APPRO    |               |  |
|  | 5,049,480          | 09/17/1991 | Nebe et al.                             |          | 430                   | 281      |          |               |  |
|  | 5,338,391          | 08/16/1994 | Suppelsa et al.                         |          | 156                   | 630      |          |               |  |
|  |                    |            | FOREIGN PATENT DOCUM                    | ENTS     |                       |          |          |               |  |
|  | DOCUMENT<br>NUMBER |            |   |          | CLASS                 | SUBCLASS | TRANS    | _ATION<br>YES |  |
|  | 0 657 932          | 12/09/1994 | EPO                                     |          |                       |          |          |               |  |
|  | 11-121527          | 04/30/1999 | Japan (English abstract only)           |          |                       |          | х        |               |  |
|  | 08-222840          | 08/30/1996 | Japan (English abstract only)           |          |                       |          | X        | :             |  |
|  |                    |            |   |          |                       |          |          |               |  |
|  |                    |            |   |          |                       |          |          |               |  |
|  |                    |            |   |          |                       |          |          |               |  |
|  |                    |            |   |          |                       |          |          |               |  |
|  |                    |            |   |          |                       |          |          |               |  |
|  |                    |            |   |          |                       |          |          |               |  |
|  |                    |            |   |          |                       |          |          |               |  |
|  |                    |            |   |          |                       |          |          |               |  |
|  |                    |            |   |          |                       |          |          |               |  |
|  | *                  | OTHE       | R DOCUMENT(S) (Including Author, Title, | Date, Pe | ertinent Pages, Etc.) |          |          |               |  |
|  |                    |            |   |          |                       |          |          |               |  |
|  |                    |            |   |          |                       |          |          |               |  |
|  |                    |            |   |          |                       |          |          |               |  |
|  |                    |            |   |          |                       |          |          |               |  |
|  |                    |            |   |          |                       |          |          |               |  |
|  |                    |            |   |          |                       |          |          |               |  |
| EXAMINER   |                    |            |   |          | DATE CONSIDERE        | iD       |          |               |  |

<sup>\*</sup>EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

## INTERNATIONAL SEARCH REPORT

International Application No PCT/JP 01/06230

A. CLASSIFICATION OF SUBJECT MATTER IPC 7 H05K1/11 H05K3/32 H05K3/06 H05K1/09 H01L21/48 H01L21/60 According to International Patent Classification (IPC) or to both national classification and IPC B. FIELDS SEARCHED Minimum documentation searched (classification system followed by classification symbols) HO5K HO1L IPC 7 Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched Electronic data base consulted during the international search (name of data base and, where practical, search terms used) EPO-Internal, PAJ, WPI Data C. DOCUMENTS CONSIDERED TO BE RELEVANT Citation of document, with indication, where appropriate, of the relevant passages Relevant to claim No. Category ° US 5 049 480 A (NEBE ET AL.) 1,2,5,6 Α 17 September 1991 (1991-09-17) column 12, line 30 -column 13, line 4 Α EP 0 657 932 A (MATSUSHITA ELECTRIC IND CO 1,5,6 LTD) 14 June 1995 (1995-06-14) column 9, line 2 - line 37; figure 1 PATENT ABSTRACTS OF JAPAN 1,4-6Α vol. 1996, no. 12, 26 December 1996 (1996-12-26) & JP 08 222840 A (SUMITOMO METAL IND LTD; SUMITOMO KINZOKU ELECTRO DEVICE: KK), 30 August 1996 (1996-08-30) abstract Patent family members are listed in annex. Further documents are listed in the continuation of box C. X χ Special categories of cited documents: 'T' later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the "A" document defining the general state of the art which is not considered to be of particular relevance invention \*E\* earlier document but published on or after the international filing date "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone \*L\* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) 'Y' document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such docu-\*O\* document referring to an oral disclosure, use, 'exhibition or other means ments, such combination being obvious to a person skilled \*P\* document published prior to the international filing date but later than the priority date claimed \*&\* document member of the same patent family Date of mailing of the international search report Date of the actual completion of the international search 02/04/2002 20 March 2002 Authorized officer Name and mailing address of the ISA European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Mes, L Fax: (+31-70) 340-3016

1

## INTERNATIONAL SEARCH REPORT

International Application No PCT/JP 01/06230

| Category ° | Citation of document, with indication, where appropriate, of the relevant passages  | Relevant to claim No. |  |
|------------|---|-----------------------|--|
| A          | PATENT ABSTRACTS OF JAPAN vol. 1999, no. 09, 30 July 1999 (1999-07-30) & JP 11 121527 A (PFU LTD), 30 April 1999 (1999-04-30) abstract US 5 338 391 A (SUPPELSA ET AL.) | 1,5,6                 |  |
|            | 16 August 1994 (1994-08-16) abstract; figures   |                       |  |
|            |   |                       |  |
|            |   |                       |  |
|            |   |                       |  |
|            |   |                       |  |
|            |   |                       |  |

1

## INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No
PCT/JP 01/06230

| Patent document |                    |   | Publication    | *                                | Patent family   | Publication  |  |
|-----------------|--------------------|---|----------------|----------------------------------|---|--|--|
|                 | d in search report |   | date           |                                  | member(s)   | date   |  |
| 05              | 5049480            | A | 17-09-1991<br> | NONE                             |   |  |  |
| EP              | 0657932            | A | 14-06-1995     | CN<br>CN<br>DE<br>EP<br>JP<br>US | 1113607 A ,B<br>1221309 A<br>69428181 D1<br>0657932 A2<br>7231050 A<br>5640051 A<br>5628919 A | 20-12-1995<br>30-06-1999<br>11-10-2001<br>14-06-1995<br>29-08-1995<br>17-06-1997<br>13-05-1997 |  |
| JP              | 08222840           | Α | 30-08-1996     | NONE                             |   |  |  |
| JP              | 11121527           | Α | 30-04-1999     | NONE                             |   |  |  |
| US              | 5338391            | Α | 16-08-1994     | NONE                             |   |  |  |